anticipation

CHRISTIAN SOCIAL THOUGHT IN FUTURE PERSPECTIVE

No. 12 September, 1972

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These papers are circulated for the information of participants in the ecumenical enquiry on "The Future of Man and Society in a World of Science-Based Technology". Comments are welcome.

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Note:

The "Growth Debate" continues to claim attention. It has many facets, and its ramifications and implications for social thought continue to be explored on all sides. The papers assembled for this issue of Anticipation show how far reaching the discussion is and its significance for our understanding of the future of man and society.

- Mr. Mahbub ul Haq is senior economic adviser to the World Bank, Washington, D.C. He presented this paper to an International Development Conference in Washington, D.C. in April. He emphasizes that he speaks his personal opinion in this paper.

- The paper by Prof. Charles Birch was presented to the Inaugural Meeting of Zero Population Growth (Australia) in Adelaide, in May. Prof. Birch is well-known to the readers of Anticipation, as Head of the School of Biological Sciences, University of Sydney, Australia.

- The paper by Prof. J.A. Whyte of Edinburgh, Scotland, is a contribution to the Church of Scotland study project on Society, Religion and Technology.

- Dr. Pyong-Choon Hahm of Korea contributes the paper on the environment problem seen in an Asian perspective, as a commentary to the World Council of Churches paper on Global Environment. Dr. Hahm is special assistant to the President of the Republic of Korea.

- A few years ago W.H. Auden, the American poet, attended a symposium of scientists and philosophers organized by the Nobel Foundation in Stockholm, on the theme "The Place of Value in a World of Fact". His reflections on the Conference and the contributions of the participations were published in the Columbia Forum, (Columbia University, New York City) and excerpts are republished here.

- Prof. Richard Shaull was one of those criticized in an article "The Revolution Beyond the Revolutions" published in Anticipation no. 9. His rejoinder was received earlier this year, but due to the delay in the publication of recent issues of Anticipation it is only published now. Prof. Shaull is on the Faculty of Princeton Theological Seminary, U.S.A.

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THE CRISIS IN DEVELOPMENT STRATEGIES

Mahbub ul Haq

I have been asked to sum up the present crisis in the developing world in 20 minutes! The developing world is so diverse and the crisis in development has been building up for so long that any summary treatment of it is likely to be challenged all around. However I shall try, much against my own better judgement. One firm disclaimer before I start: I shall be expressing only my personal views on the subject which in no way should be attributed to the institution with which I am currently associated.

I believe that economic development is in serious trouble today. And the indications are many.

- After two decades of development, the achievements are quite meagre. When you rip aside the confusing figures on growth rates, you find that for about two-thirds of humanity the increase in per capita income has been less than one dollar a year for the last 20 years.

- Even this increase, miserable as it may seem, has been unevenly distributed, with the poorest 40% of the population hopelessly squeezed in its struggle for existence and sometimes getting even less than what it received 20 years ago.

- Some successful cases of development have turned into development disasters - Pakistan and Nigeria among them.

- There is "development weariness" in many developing countries today with strident voices asking for a social and economic revolution, and there is "aid weariness" in the developed countries today, with many voices asking for an end to a partnership which was never much of a partnership.

- And to cap it all, many advocates of zero growth have sprung up in the very societies where growth was always regarded as a sacred goddess and who preached to the developing countries the virtues of an undiluted commitment to growth objectives, underlining how serious the reaction really is against growth for the sake of growth.

What has really gone wrong? Why is there such a disillusionment about economic development? Where are the origins of the present crisis?

I believe that the developing countries have themselves to blame for much of the present sorry mess.

Two decades ago, when the developing countries set out to accelerate their pace of economic development, they seemed to have made three basic decisions.

- Dazzled by the high living standards of the developed countries and convinced that real life begins at $1000 or thereabouts, they decided to go

after high growth rates in GNP in their mad chase after certain magic figures of average per capita incomes.

- They generally adopted 'mixed economy' as a style of development, convinced that they were smart enough to combine the best features of capitalism and socialism.

- They turned to the developed countries for generous assistance, hoping that this will make possible the attainment of high growth rates and living standards over a manageable period of time.

All these three decisions turned out to be disastrous.

The chase of the Western living standards was illusory at best. After two decades, the evidence is painfully clear. The per capita income disparity between rich and poor nations has continued to widen in the last 20 years. Today, the average per capita income of the developed world is $2400 compared to $180 in the developing countries. The gap has widened to $2220. It is expected to widen by another $1100 by 1980. And all the present indications are that the gap will continue widening and the rich nations will continue becoming richer, despite all the liberalism that is generally expressed in forums like this. Just to underline how hopeless it is to expect the gap between rich and poor nations to narrow, let me mention just one comparison: the increase in the per capita GNP of the U.S. in one year equals the increase that India may be able to manage in about 100 years. Therefore, to conceive the objectives of development in terms of Western living standards or to focus on the widening income gap between the rich and the poor nations is not meaningful at all, except to make the rich nations feel ashamed of themselves from time to time. The developing countries have no choice but to turn inwards, much the same way as Communist China did 23 years ago, and to adopt a different style of life, seeking a consumption pattern more consistent with their own poverty - pots and pans and bicycles and simple consumption habits - without being seduced by the life styles of the rich. This requires a redefinition of economic and social objectives which is of truly staggering proportions, a liquidation of the privileged groups and vested interests which may well be impossible in many societies, a redistribution of political and economic power which may only be achieved through revolutions rather than through an evolutionary change.

This also means that the developing countries have to search for a new development strategy. The old strategy is based on the quiet assumption that poverty can be taken care of through high growth rates which will eventually filter down to the masses. In this strategy, high growth rates are always better than low growth rates and distribution can be taken care of after growth is achieved. Both these premises have proved bankrupt by now.

It is not true that high growth rates are invariably preferable to low growth rates since they enlarge society's options. It all depends on the structure of these growth rates. If a high growth rate is achieved through rising military expenditures, or through the production of luxury goods for the rich and the privileged, it is not necessarily better than a lower growth rate which is more evenly distributed. In other words, judgements about different levels of growth rates cannot be made independently of the income distribution implicit in them. It is not merely a question of how much is produced but what is produced and how it is distributed. The GNP measurements, unfortunately, do not register social satisfaction.

Here the second part of the old strategy comes in which argues that income distribution is a subsequent consideration. If there are more material goods and services in the system, they can always be redistributed in such a way as to create more social satisfaction. This is simply not true. And it is important that this line of reasoning be rejected as it has done considerable damage already.

It is not true for at least the following three reasons:

- Poor societies have often very poor means of redistributing incomes. The coverage of the fiscal systems is generally very limited. Even when income distribution is extremely skewed, it is difficult to reach through direct taxation. To illustrate, even if 60% of the income accrues to 20% of the population in India, this still implies an average per capita income level of $300 for the "rich" which is below the income tax exemption limit of $400. In other words, income transfers from one sector to the other can be arranged only to a very limited extent in poor societies through the taxation machinery.

- Income flows are not financial: they are in the form of physical goods and services. They are influenced by the initial distribution of income. If the society has increased its income in the form of luxury housing and motor cars, how do you really convert it into low cost housing and public buses, short of their physical take over by the poor?

- The institutions which create growth are not neutral as to its distribution. Thus if the growth institutions are characterized by wide disparities in land holdings and concentrations of industrial wealth, the process of growth will strengthen them further and they will resist and frustrate all future attempts to take away their powers and privileges through orderly reforms. This is essentially what happened in Pakistan in the 1960's.

The new development strategy, therefore, must reject the thesis that poverty can be attacked <u>indirectly</u> through the growth rates filtering down to the masses. It must be based on the premise that poverty must be attacked <u>directly</u>.

What are the elements in such a direct attack on mass poverty? It is difficult to say at this stage since the developing countries are only beginning to perceive this problem in a new perspective. But let me mention a few elements which are critical:

- To start with, the focus should shift to the poorest 40-50% in society. Who are they? How numerous they are? How their living standards have behaved over time? Let us find out a little more, even at this late stage, about the problem we set out to tackle about 20 years ago.

- In planning national production targets, the basic minimum needs of these poor should be taken into account, irrespective of whether they can express them in the market or not. In other words, market demand - which is so largely influenced by existing income distribution - should

be rejected explicitly in favour of fixing national consumption and production targets on the basis of minimum human needs. We have been slaves of the concept of market demand for too long. But the concept of market demand mocks poverty or plainly ignores it as the poor have very little purchasing power.

- It follows that the problem of development must be redefined as a selective attack on the worst forms of poverty. Development goals should be expressed in terms of progressive reduction and eventual elimination of malnutrition, disease, illiteracy, squalor, unemployment and inequalities. Social indicators must be developed and progress of plans must be measured in terms of specific and quantitative goals in these fields and not in terms of average per capita income. We were taught to take care of our GNP as this will take care of poverty. Let us reverse this and take care of poverty first as the GNP can take care of itself since it is only a convenient summation, and not a motivation, for human efforts.

- It also follows that the concerns for more production and better distribution should be brought together and not treated separately. This invariably means that employment should be treated as a primary, not a secondary, objective of development since it is the most powerful means of redistributing incomes in a poor society. Capital should not be concentrated in a small modern sector, enjoying high productivity and savings, but spread thinly over a wide segment of the economy - through public works programmes, if necessary, and even at the risk of lowering the average productivity of labour and lowering the future rate of growth. The poor societies have to squarely face this choice. They have a limited amount of capital. They can either raise the productivity of a small part of the labour force quite high in the modern sector while leaving a large part unemployed or settle for a lower average productivity but full employment. Again, it appears to me that Communist China made the second choice and was, therefore, able to achieve full employment and equitable income distribution at a relatively low level of per capita income.

But can such a strategy of development be conceived and implemented in the present political and economic structures in the developing countries? And here we come to the second of the disastrous decisions: the choice of the mixed economy. In most cases, such a choice has combined the worst, not the best, features of capitalism and socialism. It has often prevented the developing countries from honest-to-goodness economic incentives and free functioning of the price system to achieve efficiency in a capitalistic framework, if not equity; in reality, there have been too many inefficient administrative controls and price distortion At the same time, it has prevented these societies from pursuing their goals in a truly socialistic framework as mixed economy institutions were often more capitalistic than not. And the end result often is that they fall between two stools: combining weak economic incentive with bureaucratic socialism. Neither the ends of growth nor equity are served by such confusion in social and political objectives within the framework of a mixed economy.

My own feeling is that the days of the mixed economy are numbered. The developing countries will have to become either more frankly capitalistic or more genuinely socialistic. Th

capitalistic alternative is workable only in those situations where the society is willing to accept income inequalities over a long period of time without exploding or where extremely high growth rates (10 to 15%) can be financed with a generous inflow of resources from Western friends. Otherwise, the only alternative is a genuinely socialist system, based on a different pattern of society. But this does not mean bureaucratic socialism or post-box socialism, it means a major change in the political balance of power within these societies and drastic economic and social reforms. Whether the developing countries can manage such a change without violent revolutions is a critical question of our time.

And now let me turn briefly to the third disastrous decision: the dependence on foreign assistance. Let me make it quite clear that I am one of those who has always believed in economic liberalism and in a genuine partnership between the developed and the developing countries. But the sorry record of foreign assistance in the last two decades is beginning to convince me, as it has convinced many of my liberal colleagues, that the developing world would have been better off without such assistance. Unfortunately, I do not have the time to go into the early origins of foreign assistance, its changing motivations and its present plight, but let me offer a few observations quite baldly without elaboration.

- The level of foreign assistance that is required for a meaningful change in the developing countries over a short period of a decade or so through the growth rate route is at least 4 to 5 times the present level of $7 billion. The developed countries have neither the will nor the imagination to offer such assistance.

- The present levels of assistance are only of a marginal significance for the developing countries and come with so many project conditions, country tying, foreign consultants and technology, and irritating debt problems that they sap up the initiative and freedom of action of the developing world.

- The developing countries must regard foreign assistance as an undependable residual in their total planning effort and turn their energies to internal institutional changes that are required for creating a different economic and social order, based on egalitarianism and second-best standard of living.

- In the international field, the developing countries should organize their "poor power" to wring major concessions from the rich nations and to arrange for a genuine transfer of resources. Since the rich nations are going to shrink in the next few decades to less than 10% of the total world population with over 70% of world income, the poor will be numerous enough and annoyed enough to organize such an effort.

- One element in such a confrontation will be to serve notice to the developed nations that the developing countries cannot pay their present foreign debt of $60 billion and the world community must make arrangements for its orderly cancellation.

- Another element will be to exploit their collective bargaining power in their negotiations with the rich. Recently, oil negotiations under OPEC

are expected to yield $20 billion of additional revenues to the oil producing countries by 1980. Similarly, if the developing countries can exploit the current concern about depletion of non-renewable resources and agitate for a 10% tax on consumers of these minerals, they could collect as much as $30 billion over this decade for a common international development fund. Again, they can stake their claim to the commonly-held resources of mankind, like oceans and space, and start demanding that 80% of the proceeds from the exploitation of such resources should go to them on the basis of world population.

What I am trying to convey here is the emerging mood in the developing countries rather than my own deeply held beliefs. I am not an apostle of confrontation, nor am I prepared to forsake my own liberalism. But I think it is important that we realize that liberalism cannot survive in an illiberal world. The developing countries are passing through a very dark and ugly mood. They are questioning all the assumptions on which they based their early development strategy. I cannot predict what may come out of this re-examination. But if I have to make any guesses today, I would expect that economic development in the next few years will be increasingly based on a new strategy embodying a direct attack on mass poverty, a genuine turn towards socialism and a far greater degree of self-reliance. This is the new manifesto that most developing countries are trying to articulate. But there is a wide gap between articulation and implementation, between dim perception and real action. The future of the developing world will turn on how far this gap can be bridged without violent political explosions.

THREE FACTS, EIGHT FALLACIES AND THREE AXIOMS ABOUT POPULATION AND ENVIRONMENT

Charles Birch

A. Three Facts about Population and Environment

Three facts identify the singularity of our time and distinguish it from all other periods of human history.

1. About Population

It took a million years to produce the first billion people. It took a hundred years to produce the second billion (in the 1850's). It will take 15 years to produce the fourth billion (by 1973).

The next 40 years will add to the world's population more people than the whole history of mankind has done to date. It is already too late to do much about that. It is already too late to prevent Australia's population from doubling.

From first man to now, man's population has doubled 30 times. If it were to double another 15 times there would be one square yard for every person.

2. About Resource Utilization

Originally a unit of population was simply a human being whose needs were met by eating 2500 calories and 60 grams of protein a day. Man's daily need of energy was equivalent to the continuous burning of a single 100 watt bulb. A unit of population today in the developed world consists of a human being wrapped in tons of steel, copper, aluminium, lead, tin, zinc and plastics, each day gobbling up sixty pounds of raw steel and many pounds of other minerals. Far from getting these things in his home land he ranges abroad much as a hunter and more often than not in the poorer countries. His energy need instead of being equivalent to a single 100 watt lamp is equivalent to ten one thousand watt radiators continuously burning.

According to a U.S. Senate report, the American people consumed, in the decade 1959-68, more of the resources of the world than all the people of the earth consumed in all previous history. If all the peoples of the world were to consume resources at the American rate they would use up in six years all the known petroleum reserves and their annual consumption of iron, copper, sulphur, timber and water would exceed the present available store of these resources. Of the 100 minerals most important to the U.S. industry it possesses within its borders adequate supplies of only 12.

The Ecological Society of America in submitting what it considered to be one of the most critical resource problems to the U.N. Conference on Human Environment this June in Stockholm, singled out phosphates. The green revolution is dependent upon it as is most agriculture. Known resources will be exhausted in 60 years. Without phosphatic fertilizers, the planet can support between one thousand and two thousand million people, that is one thousand million less than the present world population.

If you add all together the world's industry since the beginning of mankind to the end of the Second World War, this is less than the next three years of industrialization in the world.

3. About the Earth

> It is finite yet most of our considerations fail to take this into account. It has a fixed supply of arable land, phosphates, and all other minerals including fossil fuels and it has a finite capacity for pollution absorption. On the other hand, human society has an inbuilt tendency to grow in its use of all these resources and in pollution emissions.

This fundamental paradox confronts us with the necessity of determining what is the carrying capacity of his farm. Overstock the farm and he destroys it. Overstock the earth and we destroy it.

Because the earth is finite, growth in population and in use of resources and pollution emission must sooner or later stop. The quantity that most obviously is in finite supply which is completely inelastic is arable land. There is about 3.2 billion hectares of land suitable for agriculture on the earth. Half of this is under cultivation today. The remaining half will require immense capital costs to settle, clear, irrigate and fertilize before it produces food. If we decide to incur the costs and cultivate all possible arable land, how many people could we expect to feed, if we assume that 0.4 hectares per person is sufficient (the U.S. requires 0.9 hectares per person), and if we assume that world population continues to grow at 2.1 per cent per year. By the year 2000 all available land will be used up and after that we face a complete land shortage. We shall have run out of land. In the meantime, half a million acres disappear every day under concrete for roads and factories and houses. The exact numerical assumptions we make about the limits of the earth are essentially unimportant in face of exponentially growing populations because doubling productivity gives us a breathing space of one population doubling time, a mere 30 years. And if you look for food from the sea, that is a red herring because the total catch of fish in 1969 represented only a few per cent of the world's protein, moreover the total catch in 1970 decreased from 1969. This was the first decrease since the Second World War. The prospects are for further declines.

We are faced with further obvious constraints in connection with unreversible resources; coal will last a century, petroleum half this time, copper about 60 years and aluminium less than 50 years. Within a hundred years there will be almost none of any of these and several other minerals left.

A second limitation is the globe's finite capacity to absorb pollution. We thought the air and seas were infinite sinks for our wastes. Now we know we can block with our pollutan essential life-supporting processes, so that lakes and rivers (the Parramatta River in Austr lia is one) die. When we exceed the absorptive capacity of the environment, we run the risk of completely destroying the natural degradation processes and so reduce the future absorpti capacity. The absorptive capacity of the globe, far from being a good in unlimited supply, is an extremely valuable resource, which in fact limits the total possible emissions from human activity.

B. What has to be done to save life on earth?

On a global scale we are experiencing an exponential growth in population in consumption of resources and in pollution. Since there is an upper limit to the supply of resources and an upper limit to the amount of pollution that can be absorbed, it should be clear that the growth we are experiencing cannot continue indefinitely. Indeed, we shall pass several constraints within the next couple of generations. There are no mechanisms within the system to bring growth to a smooth stop. The tendency of such a system, as any ecologist knows, is to overshoot the carrying capacity and for the population subsequently to experience a crash. We either let nature take its catastrophic course or we set out deliberately to manage the planet as a commons.

If you were a member of a spaceship with limited resources you would work out a plan of survival for the journey; how many people the ship could carry and what was needed for the journey. On board with your resources you would also have a plan for dividing the resources amongst the crew and passengers for the total journey. Alternatively, you could let an unlimited mob crowd on board, grab what you could get for yourself, shoot most of the others and throw them overboard or else enslave them or a bit of both. It is pretty clear which course the developed countries are following right now. They are laying hands on the remaining reserves of fossil fuel in the poorer countries, some sixty per cent of the world's people get a mere 10 per cent of the world's income. Two out of every three persons in the world still live untouched by electricity, that is about the same number of people that lived in the world 20 years ago. Two out of three of the world's population have no access to potable water. Such water as they have we are dosing with nitrates and insecticides (one hundred tons of DDT in the world rivers each year).

If we decided to change our ways and follow the first plan of survival, we would need to do several things. (1) We would seek to determine the carrying capacity of spaceship earth and (2) stabilize population at this number or below. (3) We would reduce our use of resources. That means de-development in the developed world and an "intermediate technology" in the developing world to achieve an overall cessation of growth in production of material goods; there appears to be no possibility that the earth could support the present population at a standard of living equivalent to that in the developed countries. (4) The state of no growth or the equilibrium society would ultimately require an equible distribution of the wealth throughout the world, because one would no longer be able to accept inequalities in the present under the pretext that they would be removed through future growth. (5) The emphasis would move from growth in goods to growth in services. All this would require a revolution in economics. It would be a move from what Kenneth Boulding called a "cowboy economy" to a "spaceship economy". And if all that seems airy-fairy and unrealistic let me quote from that international organization of establishment respectability the OECD. Its recent publication Science, Growth and Society contains the following statement: "Many aspects of developed society are approaching a condition that may be described as the precursor of saturation, in the sense that things cannot go on growing much longer on some lines without reaching fairly fundamental limits. Indicators of saturation are present in total population, pollution of environment, size of urban conglomerations, in traffic, even in higher education ... the general public will be slow to accept the full implications of the goal of harmony of man and his environment, it does not yet recognize the costs, both in economic terms and in terms of limitations on freedom of individual choice - and it will be only slowly educated to understand and accept them."

That is where Z.P.G. comes in. The objective of Z.P.G. is exact replacement of one generation by the succeeding one. The parental generation is replaced by their offspring and no more. That is, cessation of population growth or reaching the state the demographers define as a net reproduction rate of one. In Australia an average family of 2.1 children would achieve demographic replacement. 2.6 children gives a rate of growth over 1 per cent per annum, hence the Z.P.G. slogan, two is enough, three too many. This would not lead to zero population growth at once, unless you killed off the parents the day the second child was born! It takes about 60 - 70 years for replacement reproduction to achieve zero population growth. So if we all start practising Z.P.G. now, we will not stabilize our population for a lifetime. That is why action is urgent now. Precisely because population growth is slow to be controlled, it is the problem to tackle first. But such action should not divert our attention from the necessity of simultaneous attention to reduction in use of resources and in pollution control. The message of Z.P.G. is very simple and easy to learn. No one anywhere in the world starting a family today, who has any interest in their own survival or the survival and health of their children, will have more than two children.

The message is simple enough but it is not easy to get across. There are a number of widely held fallacies that block straight thinking on the subject.

C. Eight fallacies about population and environment

Fallacy 1. That the population explosion is a problem of the Third World and not of the developed countries, Australia included.

The world population is increasing at the rate of 1.8 per cent per year which gives a doubling time of 37 years. Most of the developed world has a rate of growth of about one per cent or a little over, Australia has a natural rate of increase of 1.2 per cent but immigration brings our growth rate up to about 2 per cent, one of the highest growth rates of developed countries, and faster than the world rate of increase. Australia has a population doubling time of 35 years. Even Japan which is so often quoted as having almost halted growth has a doubling time of 63 years.

The point is that the developed world is still growing fast and 31 per cent of the world's population is in the developed countries. But more importantly these countries use most of the resources and do nearly all the polluting. The U.S. alone uses a third of all the raw materials used on the face of the earth. It imports more protein from the developing world than it exports. All 10 million tons of the Peruvian anchovy fishery, one of the largest in the world (being equivalent to one sixth of the world's fish production) are taken each year by the developed countries and fed to their animals. The Netherlands is often quoted as a country where people can live at a high density in terms of numbers per square kilometre. But the Netherlands is terribly overcrowded in relation to their capacity to support themselves on the resources available from their part of the earth. The Netherlands is self-sufficient in practically nothing, relying on a more sparcely populated world to supply her with needed resources.

That the United States is over-populated is now recognized by the U.S. Government. Not so long ago President Eisenhower stiffly proclaimed that "this government will not, as long as I am here, have a positive political doctrine in its program that has to do with birth control". Last month the President's Commission on "Population Growth and the American

Future" endorsed population stabilization as a national goal. Thirty U.S. senators have sponsored a resolution that would declare this the policy of the U.S. Government. The Commission recommends that the birth rate be reduced from 2.5 per woman to 2.11. This would halt population growth in 70 years.

What about Australia? Each Australian has a bigger negative impact on the environment than each Indian or Indonesian, both as a resource user and as a polluter, perhaps 30 times as much. At our present rate of increase we shall have a population of 22 million by the year 2000 and there is not much we can do about that except to half the immigration which is certainly the easiest thing to do. Most of the 22 million will be living on the coastal fringe where they are today, it will just be twice as crowded in Sydney and maybe Adelaide. If we instituted Z.P.G. today we would continue to grow for 70 years. So there is no point in arguing if 13 million today is too small or too large. What we have to argue is if 20 to 30 million is too big for we are pretty well committed to that now. The facts are, of course, that we cannot cope with our present 13 million! The educational system cannot cope. Hospitals cannot cope. The rivers and estuaries on the east coast are shockingly polluted already. All of Sydney's oysters have to have a purifying treatment before they go onto the market. The Parramatta River is dead. Melbourne and Sydney have photochemical smog. And if you say we can clean all that up then let us see how effective we are at doing that before we sign away the future completely. We are not doing too well as yet. Sydney has a reasonable smog monitoring service so that every morning you can read in the newspaper just how much sulphur dioxide and carbon monoxide you breathe. Sometimes carbon monoxide gets up to 40 parts per million in the city which is higher than any city in the U.S. Sir Frederick Warner who supposedly cleaned up the Thames told us to put our chimneys higher, which is what Britain did, as a result Sweden has polluted air! Melbourne's smog is pretty bad on some days, they do not know really how bad it is because they hardly measure anything in the city's air, not because the people do not want to but the government has put so little money into monitoring that the monitors cannot even buy the essential recording equipment to set up at a number of points.

More Australians mean worse schools, more unemployment, more crime, worse pollutions, greater depletion of resources and less countryside to enjoy. I wanted to get started a project on The Future of Australia with the deliberate idea of working out just what our carrying capacity should be. It foundered on the rocks because some Australian economists said if you want to prosper you must grow and so there is no point in discussing a halt to growth. Well I do not believe that and fortunately there are some economists who do not believe it either.

If you are not convinced that Australia would be a better place with 13 million rather than 30 million then there is a much more important argument for Z.P.G. in Australia. Australia is part of the world and there are too many people in the world. The world is over-developed and, according to the only sensible definition of over-development that I shall refer to later, so is Australia.

Australia needs to grow. But not in quantity. We need to grow in quality; in the quality of education and in the quality and skill of the work force. Our goal could be to become a Scandinavia of the South Pacific. We seem bent on becoming another American juggernaut.

Fallacy 2. That distribution, not population size is the major problem of the developed countries, including Australia.

The argument goes that if only Sydney and Melbourne were spread over the Simpson Desert, then things would be all right. Perhaps they would. The suggestion often made is that only urban areas have population problems. But there are plenty of distribution-free problems, that is problems that depend upon how many people and not primarily on how they are distributed. Here are some.

Possibly the worst global pollutant of the atmosphere is atmospheric dust. It more than anything else could probably seriously alter climate. In the mid-Pacific it increases about 30 per cent per decade. It comes from agricultural lands and other sources. Persistent insecticides such as DDT are found everywhere. Water needs are distribution-free. The U.S. uses most of the water in its own rivers and now it wants to get hold of Canada's. Fossil fuels are burned wherever vehicles are, the supply is exhaustible and how long it lasts depends on how many people.

It is a fair comment that redistribution of the population of Sydney and Melbourne would be beneficial for those two cities. But redistribution presents fantastic difficulties. People live in these cities for economic necessity, convenience and for the facilities they provide. Areas that are uninhabited are defective in some of the requisite factors. It might be nice to live in the Simpson Desert with a supply of water and air conditioning. But that would be extremely costly and would create environmental havoc. What is happening is that existing urban areas just continue to expand. Sydney once had a green belt. It had to go to let the suburbs expand. Often it is prime agricultural land that gives way to urban agglomerations. That is happening in California at an alarming rate; prime farm land there is now being paved over at such a rate that 50 per cent will be destroyed by the year 2020.

Fallacy 3. That family planning will solve the population problem.

That is what people thought ten or twenty years ago! Now we know better. Family planning has failed dismally to control population growth. The catch cry of those demographers who know what is happening is now "beyond family planning". The trouble about family planning is that people still have the number of children they want. It has to be distinguished from "population control" in which deliberate attempts are made to reduce the birth rate to two children per family.

The present situation in most of Asia is grim. Three million births were prevented by family planning in 1970 and the trend is downwards. In India I.U.D.'s failed and only 400,000 are now in use. The pill too failed in many places.

As a result of the failure of family planning to control population growth, the emphasis on voluntarism is now past in the Third World. In Singapore and Mauritius, government employees with more than three children do not receive compensation when they move. In Korea there is virtually no abortion without sterilization. In five to ten years coercion will be a fact of life in several countries. China embarked on a population control programme unmatched by any other nation. Ten years ago they decided that their programme was to be one of Z.P.G. and they have cut the growth rate from 2.5 per cent per year to 1.5 per cent in less than a decade, which is a remarkable achievement. China has a strong emphasis on the

two child family. There is pressure to delay having the first child and if a woman has a third she is practically required to be sterilized and her husband also. There is social pressure to delay marriage which has worked; the average age of males when they marry is 28 to 30 years and that of females 24 to 25 years. In some localities economic sanctions are taken against workers who marry early and have more than two children, these range from denial of ration cards to dismissal from government jobs. A sophisticated pill has been distributed free since 1968 and abortion is widely available. China is a case where principles of biology have transcended ideology, for Marx favoured population growth.

Garret Hardin, the American biologist, has argued convincingly for what he called "mutual coercion agreed upon". The alternative is a perpetuation of an intolerable situation. Very few people in the developing countries can develop normally. The Secretary General of the United Nations has estimated that 100 million children grow up with absolutely no chance at all and each year vast hordes are added.

Fallacy 4. That it is a human right to have as many children as you want.

If parenthood is a right then population control is impossible. In the sort of world we live in, it is no longer a human right to have as many children as you want. The paramount right in reproduction is not the right to procreate but the right of the child to a healthy and full life.

Fallacy 5. That it is good for the developing countries to become industrialized like the developed countries and to sell their real resources to the developed countries to buy machines and factories.

This is the way to further deterioration of the environment. It is not a redistribution of wealth but the way in which the affluent loot the unaffluent, and in the process seek to turn them into images of themselves. When the poorer countries allow their own resources to be depleted beyond a certain point, they will never have any opportunity for their own development. It might be better if they kept their oil for future food. With aid and development, capital still flows from the poorer to the richer countries. There are alternatives which are better for the developing countries and which are better for the world. One is the concept of alternative technology, how to develop labour intensive technologies and to develop with what resources you already have. Tanzania is committed to that path. It is a much saner path than to suppose that the only way to save the developing world is to grow like us and keep on growing.

Fallacy 6. That the "demographic transition" following development will solve the population problem.

This fallacy is propagated by some demographers who ought to know better. The "demographic transition" is the term used to describe the decline in birth rates of western countries in the late 19th century and early 20th century. It is the tendency of population growth to level off as a response to prosperity. The implications of this are that all you have to do to stop growing is to become affluent. However, the facts do not support this. Even after the completion of the demographic transition, the developed countries still have high growth rates. The reduction of birth rates associated with the demographic transition was not sufficient to compensate for the dramatic fall in death rate that preceded it. In

the industrial areas of the world the transition was over by 1940. A quarter of a century later birth rates in Europe, U.S.S.R., Australia, New Zealand and Japan were still almost double the death rates. In many countries the reduction in birth rates has lagged a generation or more behind reduction in mortality, in Sweden the lag was 60 years. There is no demographic evidence that there is an automatic process of population regulation that leads to a stationary population.

Fallacy 7. That technology can ultimately solve all problems of resource depletion and pollution.

This is a common belief amongst economists, though less so amongst technologists and scientists. The technological optimist believes that all our problems can be solved as fast as they arise. But there are some problems for which there is no technological answer. There is no conceivable technological solution to the problem of ever dwindling resources and ever increasing use of resources. Technological solutions, moreover, for environmental problems shunt the environmental impact rather than eliminate it. In terms of feeding a massively expanding population, technological solutions tend to be too little, too late and too expensive and are fraught with environmental effects such as insecticide and nitrate pollution in rivers and lakes.

For many of our problems it is not a new technology that we need but a new orientation of values. Indeed the key question for all of us is what are we here for anyway? If we thought more about that we might be less enthusiastic about accumulating ever more things and be more enthusiastic about living.

Fallacy 8. The overall fallacy that more is better.

In our sort of world more is often worse. That more is better is the basis of what James Weaver, the American economist, has called "gobble gobble economics". If all of us decided that our homes were adequate, our cars satisfactory, our clothing sufficient, our present sort of economics would collapse tomorrow. For it is built on the assumption that man's wants are insatiable. If a man appears to be satisfied then advertising will change all that. You have got to be made to want more things, so you buy more things, go into debt, so you have to work more to pay your debts and so on ad infinitum. But people who get more than is needed for subsistence are not necessarily happier than they were before. The affluent society of Australia has doubled its suicide rates in the big cities in the last ten years. More does not seem to be better.

C. Three Axioms on Population and Environment

Axiom 1. Every human being has a negative impact on the environment; the more developed the greater the impact.

We each use up unrenewable resources at an increasing rate, we each pollute and each disrupt natural ecosystems. The total negative impact of a population in simple terms is the number of people multiplied by some measure of per capita impact, which measure is some 30 times greater for us than for Indonesians and Indians. However, population size and environmental impact are not independent variables. As population grows so does the impact per capita, because in denser populations the number of links of persons with persons and

with things go up also; there are more roads, telephone lines and per capita power consumption also increases. There is another reason why increasing the population causes disproportionate increases in environmental deterioration, and that is the threshold effect. Below a certain limit trees survive smog. A small increase in population produces a small increase in smog but sufficient to turn living trees into dead trees. Just this seems to have happened in Sydney with an unanticipated sort of atmospheric pollutant; all Norfolk Island pines up and down the seashore of the metropolis have died quite suddenly. The suspected cause is detergent in the air. It blows in from the sewer outlets into the Pacific Ocean and apparently kills trees.

Axiom 2. Over-development of a nation starts when the citizens of that nation consume resources (energy, water, minerals, etc.) at a rate which is greater than would be possible for all the people in the world because the world could not support such total resource use and pollution emission.

If we have a standard of living which is beyond the capacity of the world to generate for all the world's population then we are over-developed in global terms, that is to say in humanitarian terms. Our richness may deprive another country from raising its standard of living. Under-development in the developing countries has its origin in the over-developed countries.

The U.S.A. accounts for 30 per cent of the non-renewable resources consumed, e.g. 37 per cent of the energy, 25 per cent of the steel, 28 per cent of the tin and 33 per cent of synthetic rubber. This behaviour is hardly consistent with the rhetoric about developing the Third World. The developed world may be able to afford the technology to utilize low grade ores when the best is used up, but the developing countries will not. Some observers argue that the poor countries are today economically dependent on our use of their resources, and indeed that the economists in these countries complain that our demand for their raw materials is too low. This merely proves that their economists are as short-sighted as ours.

Axiom 3. Population control (zero population growth) and redistribution of wealth are two essential components of any possible future of mankind.

We have to tell those who want large families they do so at the price of mortgaging their children's future and we have to tell the rich that they will have to share to survive.

A report of the U.S. National Academy of Science on unrenewable resources began with the statement: "The non-renewable resources of the world are the heritage of mankind. Their overuse or waste for temporary benefit of the few who currently possess the capacity to exploit them cannot be tolerated."

It may be possible to provide tolerable living standards for the majority of people in the world at present for an indefinite period. But that would require decisions which are going to be very difficult for us to swallow and it would involve changes in where power lies. It cannot possibly be accomplished under this present system of political and economic relationships between the nations of the world. The U.N. Conference in Stockholm in June on the Human Environment will probably indicate to what extent nations are prepared to think of the world and humanity and not just of themselves. If it has a measure of success perhaps it could lead to similar U.N. gatherings of the nations to alter the world's trading system to give strong advantage to the developing countries. We shall then begin to think of the world

as a Commons in which we all share. That commons cannot possibly be managed safely without unified management, perhaps of the sort that Paul Ehrlich has envisaged in his "World Commons Control System".

CONCLUSION

Earth which seemed so large, must now be seen in its smallness. We live in a closed system, absolutely dependent upon earth and on each other for our lives. The many things that divide us are therefore of infinitely less importance than the interdependence and danger that unites us. It is literally true that only by transcending our divisions will men be able to keep Earth as their home.

THE MORAL OUTLOOK ON GROWTH

J.A. Whyte *)

I have been asked to speak about the moral outlook, but I notice that the introductory paper on the physical resources was entitled "Physical Limits". I have a feeling I ought to be speaking about moral limits. I have a suspicion that, when things are going really well, every discipline wants to say, "Jump on our bandwagon, we are the chaps who can really take you to the promised land", and when things are going badly, every discipline begins to be self-deprecatory and to say," Well, you know, our part is not so very important after all. It is these other chaps who exercise much more influence than we do." If I seem to you to be doing this today, perhaps it is because it has been done to me. It seems to be the habit now for rather despairing ecologists to turn round and say to the moralists and theologians, "Now you must provide the new values that are going to get us out of this mess."

Some of us have perhaps wondered for a long time about the god of growth. Way back, in the days of Harold Wilson, we were hearing about 4% per annum as a magic figure that would see us through, and even an economic ignoramus used to wonder a little about how long this could go on, and about the fact that this was presented, as if it was the only component of social welfare. We have seen with dismay the increase in the number of motor cars which quite surely, as we follow all the mistakes of America, is destroying the heart of our cities and eventually will make it impossible to live without a motor car in a world which is designed for the motor car. One wonders about the whole business of planned obsolescence which seems to be a necessity of the continually growing and developing economy, because only thus can you keep it going. What determines the attitudes towards material resources which can accept and encourage such tendencies? It is a peculiar thing how social attitudes develop. I have found that I, as a youth, a child even, seemed to get from somewhere the attitude that, when something got broken, you mended it. You tried to have it repaired. You tried to mend it yourself. I was a great mender of things, not always a very successful one, but I am the sort who always tries to stick the handle back on the cup. My children, on the other hand, - and where they got it from I do not know, certainly not from us - do not mend things any more. They throw them away and expect to get another one.

Determinants of Society's Moral Outlook

I want therefore to ask the question: what determines the moral outlook and values of a society? In the recent past, everyone was shouting about growth, as some people still are. We now have this tremendous reaction from the ecologists, prophesying the doom of our planet if we continue as we have been going. Now, if moralists, especially ecclesiastical moralists, had up till now preached any kind of doom or attacked the gods of material prosperity, or asked if we could go on forever tearing up the countryside to make motorways, they were readily dismissed as the usual spoilsport church, always behind the times. Perhaps such suspicions are justified, because the Church has been too apt to condemn what is new. But now the prophets

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*) This statement is taken from the report of a Conference in Scotland on "Growth", January 1972, organized by the Project on Society, Religion and Technology of the Church of Scotland.

of doom come from the scientific side, and men have to listen to them with respect which, in these matters, they do not give to the Church. Let me quote from page 19 of the Growth folio:

> "What the OECD Report on 'Growth' does stress is that we are in for a difficult time, partly because we have allowed deterioration of living standards to proceed, in the misguided belief that anything which produced economic growth must be good for us really, and partly because, having approached the rejection of that view, we have not yet formulated a viable alternative."

Now I find that the alternative that has been formulated in terms of the 'Blueprint for Survival' alarms me almost as much as the ecological crisis itself. I take no comfort in the kind of solutions that are being put forward here.

What determines the moral outlook of a society? I am inclined to be a Marxist at this point, and say that the moral outlook of a society is a superstructure which is dependent on the substructure, that is, the basic economic structure of the society. I think we should at least ask how much truth there is in this before we rather naïvely ask some people to come along and produce a new set of moral values on which we can build a society. You do not build a society in that way. I believe that a movement which aims to change society may be inspired by moral values, but they will not become the moral values of the society until the change has taken place.

If you prefer a theological point of view to a Marxist one, I have learned enough from Reinhold Niebuhr not to believe that social and political change takes place as a result of moral exhortation. The individuals of sinful mankind may have a limited capacity for transcending their own self interest, but history and experience provide us with little ground for hope that human groups have such a capacity. The very altruism of the individual is dedicated often to the service of a group which has, in fact, deified its own self interest. Because of this tendency of groups to identify their limited self interest with that of society, or of humanity as a whole, one has to find some way of using the self interest of groups in the interest of human society. But you cannot ignore it, or believe that you will accomplish change simply by moral exhortation.

Kenneth Boulding recognizes the problem, but is not prepared to face it: "It is clear, therefore, that ethical considerations, which in a way can be regarded as a luxury in a developing society, become a necessity in a stationary one. How to translate these ethical considerations into political organization and decision-making, however, is a question that, up till now, we have had very little success in solving in any society, and one can hope that this is mainly because, up to now, we have not had to solve it." (Growth, p. 11) I am not so sure. I think those who have tried to solve it from time to time have found it almost impossible. It is, for example, almost impossible to get a moral issue to become a really vital issue in a general election. There is one issue, for example, on which I think the Church has a good record in recent years, and not only the Churches but a great many humanist groups as well, and that is the issue of development, of the needs of the Third World, of the way in which development takes place at present, which increases rather than decreases the gap between rich and poor. There are certain aspects of this problem in which some of the Churches have a bad record - for example, population control. The Roman Catholic Church in particular, which has a great deal of influence in some parts of the world, has made it very difficult for governments to proceed, even with research into population problems, which should have been

urgently undertaken long ago. Apart from that, in concern for the Third World, in international organizations such as Christian Aid and Caritas, Catholics and Protestants have shown concern and backed their concern by money and deeds. And it has not produced political action. One needs only to ask what proportion of our gross national product goes to developing countries and what percentage even of that we get back in preferential treatment.

The Resources of the Christian Ethic

Accusations are sometimes made about the past influence of religion and of religious moral values upon society. For example, John Black, in his book The Dominion of Man, picks up the point that the Christian doctrine of man's dominion over nature has been the cause of man's aggressiveness to nature, of our unbridled exploitation of natural resources, and our sense of the right to use and abuse the resources of the biosphere. It would be true, I suppose, that many of those who have exploited the natural resources of the world have held this doctrine in some way or another. But the doctrine lay there in the Bible for a long time, before Western science and technology began to exploit the world in the way it has done. In other words, the dynamic factor is not the doctrine. It seems more likely that the doctrine has been discovered, or rediscovered, as a useful justification for what men have begun to do for other reasons. I think the same thing might be said about the much abused Protestant Ethic. The Protestant attitude to the world is certainly quite different from that of medieval Catholicism. Without that change, we would not have had the development of the modern world and, after all, let us not become Luddites and suggest that we regret all that has happened. The Protestant Ethic may have played its part in what is good and what is evil in the development, but the fact that it has been used and distorted by those who want to find a good moral justification for the pursuit of their own economic interest does not prove that it is the ethic that has impelled them on that path.

Are there resources within the Christian Ethic (and within the Western tradition generally) which can be rediscovered in our situation, and can help? Theologians are always looking for these, and I believe that some can be found, although I would maintain my warning about the ineffectiveness of moral exhortation in isolation from social change. It is interesting to reflect that Harvey Cox's book, The Secular City, which was published in 1965, was an attempt to get laggard Christians to accept with joy the development of modern technology, and to see the city as having a potential for human development and human freedom. Cox compared the freedom of man in the city, where he can choose his own friends, his own activities, and become, or discover himself through that freedom, with the bondage which a man knows in a village community where he is forced to know everybody and is denied the anonymity and privacy that the city gives him. Cox complained that the Church's idea of community extolled the village community over the city community. And now what do you find? The Blueprint for Survival takes you right back to the villages. How can you win? I do not share all the optimism which Cox, in 1965, had about the modern world, but I am still behind him at that point. I am a city man, and that is why the Blueprint alarms me. I do not want to throw away the potential value for human life that is present in the city; rather we must prevent ourselves from actually destroying our cities, which we are doing through the motor car.

What resources are there for our situation in the Christian Ethic? Let me briefly suggest one or two. I should wish to reinterpret the doctrine of the dominion of man in terms of the Christian understanding of reconciliation. The basic value of our society has been that of competition. Something strange has happened in Western culture. Men have been liberated from the fear of nature, which, over such a large part of the world, prevents them from using nature freely. The gods and the demons and the river spirits have been cast out. The natu-

ral processes are there for our investigation. This is the basis of our whole Western technological society. But in place of the fear of nature has come an increased fear of our fellow men. We have been aggressive and competitive towards one another, and what we have done is to project this aggression and competition into our exploitation of natural resources. What we do to our environment is a projection of our attitudes to one another. It is because we live in a society in which we are forced to be competitive, hostile, suspicious of one another, aggressive towards one another, that we use nature in the same irresponsible way. May it not be the case that, only when men become reconciled to one another will they become reconciled to their environment; that when they learn to treat one another with respect, they will learn to treat their environment also with respect? The World Alliance of Reformed Churches in Nairobi in 1970 looked at the problem of reconciliation and creation and, in one of its Reports, said: "When we face the urgent problems of our time regarding the pollution of our environment, the squandering of natural resources, the extermination of flora and fauna, overpopulation, and even the defilement of space, we find ourselves concerned not simply with a violation of the natural creation but with the fouling of the human nest, the deprivation of human life by the plundering of the natural environment, devastation by weapons of mass destruction, the squandering of the heritage of future generations. Yet, at the same time, we must recognize that the plunderers of our planet are the creators of a new civilization, and that modern science and technology have also the potential to provide a fuller life for future generations."

The Report suggested also that reconciled man must see his dominion as patterned on that of God: "If God's dominion is seen as arbitrary power, then man may be on the one hand submissive to God, and on the other aggressive and oppressive in exercising over the created world. If God's dominion is seen in the light of God's reconciliation, however, other consequences follow." "Christ's Lordship is seen in service and self-sacrifice, and this is the pattern for man's dominion." Dominion in other words, means service. Here then is one resource wherefrom, within the Christian tradition, we can re-interpret man's dominion over nature in terms of reconciliation, service, responsibility. More on the moral than the theological level, it seems to me that, in place of conflict and competition, we have to press the concept of responsibility.

The Meaning of Human Responsibility

Is it not a fact that our society depends on a very great deal of cooperation, otherwise nothing would happen at all? Yet, to a very great extent, we still have economic values determined by competition. Responsibility involves taking seriously the importance of persons. Theodore Roszak, in his book The Making of a Counter-Culture, suggests that the youth culture has reacted against the dominion of the expert in our society. This is precisely because of the tendency of the expert to be an expert in anything except human persons, and not to have personal values at the head of his list. B.F. Skinner, the behavioural psychologist, is perhaps the model for the technocrats against whom the young people are rebelling, those who believe that man can be conditioned in to doing or believing anything, those who see the world as a gigantic Skinner box. The M.I.T. scientist listed four things that made up the factor of "the quality of life". All material factors and all important. But is there nothing more? There is no mention of freedom, as though men do not need freedom. There is no mention of human relationships, as if people do not require good human relationships. One could go on and on. There is nothing about the spirit of man. We have to seek a society having a responsibility to persons in the fullest sense of that word, responsibility to their development as people who can enjoy one another and enjoy creation also. I do not find the Bishop

of Kingston's new version of the Ten Commandments particularly helpful here. "You shall not call on the name of the Lord your God in vain by calling on his name but ignoring his natural law." We cannot control development in terms of a priori prohibitions. We have rather to look soberly at the consequences for people of what we are doing. I do not think we can even talk about human nature as something fixed and static, but something with potentialities. This is why I am afraid that, if you remove altogether the concept of growth, we may lose the concept of growth in human potentialities also. That if we seek a stable society, it might become a static society in which human beings are not free to develop.

It may be that we need an ethic of being rather than an ethic of achievement. This is something which the counter-culture may teach us. A high-ranking army officer came recently to St. Andrews to give a public lecture which was, in fact, a recruiting drive for the army. The sheer non-meeting of minds between him and his student audience, like going past one another in the dark, was quite astonishing. I thought I had pinned it down when I realized that he was basing everything on an ethic of achievement - your value is what you will be able to achieve, the army will provide you with the opportunity of achieving things, you will be able to become somebody through this achievement. The students who were there believed that their human value lay in being and expressing themselves, just in being and enjoying it, and so the two sides never met. Perhaps our society needs to learn the values of being and enjoying. On the other hand, we cannot turn our backs on achievements since, in order that we may have a life to enjoy, certain things such as the correct working of our sewage systems, a proper supply of electric power, efficient garbage disposal and so on, have to be achieved.

And here I come to my last point. I do not believe that these things can become the prevalent values of a new society before, in some sense, that society exists. They can be the values of a group which is seeking to change society. They will not become the values of society itself. We do not change things simply by moral exhortation. This is why I think this is political dynamite that we are handling, and I am disappointed that this does not seem to be recognized in the papers that are in front of us. The assumption that reason will prevail simply does not relate to the way in which politics work. Governments are like wheelbarrows - they have to be pushed and pushed hard. Simply to provide clear, calm reason is not the way to change anything at all. It is very strange to me that this whole concern has come about at a time when in both Britain and America you have politicians in power who are dedicated to the gospel of competition, almost in a nineteenth century way. I have wondered whether, if it were recognized that there are political consequences in this concern, we might hope for a more creative type of revolutionary movement, rather than the purely destructive attitudes of most modern forms of Marxism which believe that all that is necessary is to destroy society in the blind hope that something better will follow. A more creative revolutionary movement would not abandon technology, but would seek to use man's vast intellectual achievements for the good of mankind and for improving the quality of human life; the more romantic forms of Marxism today do not take account of the fact that, if we abandon the technological basis of our modern society, we will have not a Blueprint for Survival but a mere scrabbling around in huts.

Finally, I am concerned that we are still thinking about the situation from the point of view of comfortable Westerners, whose problem is the disposal of our waste products, the destruction of our cities, the pollution of our atmosphere and whether we ought to be buying that second car or not, and really we have to think of this in terms of the whole world of men, the majority of whom are still living in huts.

A KOREAN COMMENT ON THE CHRISTIAN CONCERN FOR THE FUTURE OF THE GLOBAL ENVIRONMENT

Pyong-Choon Hahm

As one who participated in the World Council of Churches' Exploratory Conference on "The Future of Man and Society", Geneva, June 28 - July 4, 1970, I have been watching the continuing discussion on the subject with great interest and concern. Here are some of my thoughts on the subject, put in a rather cursory fashion.

Industrialization without Pollution

A statement such as, "If industrialization means pollution, let's have pollution", is said to summarize rather pithily the perspective of economically undeveloped areas of the globe.

The fact that the industrially advanced portion of mankind may be faced with "the second technological revolution" does not make it any easier for the underdeveloped world to accept its poverty, disease, parasites, primitive communication and political weakness. Until even a few years ago, the "pollution" of which the underdeveloped cultures had to be ashamed was political and economic deprivation produced by the "primitive" way of life rather than black smoke belching out of a factory smokestack or industrial waste dumped into the sea. It is a supreme irony of world history that the concern for environmental pollution on the part of the industrially advanced portion of the globe is now being thrust into the path of industrial development of the underdeveloped world which has finally succeeded in forging a commitment to technological salvation of its own. It is as if the industrialized world had purposely taunted and humiliated the underdeveloped world into abandoning its non-industrial cosmology in favour of a more European and technologically oriented world-view in order now to frustrate and disappoint the Third World's new commitment to development.

If a member of the less-developed world looks at such statistics as the United States, with under 5 per cent of the world's population, consumes a quarter of the world's output of fertilizer and steel, 40 per cent of its wood pulp, 36 per cent of its fossil fuels, etc., the new-fashioned outburst of ecological indignation sounds more like a sinister conspiracy of the industrially affluent and powerful to defeat the aspirations of the developing countries for a better and richer life. This suspicion is greatly strengthened by the lack of any visible diminution in the drive for economic development and a higher level of technological growth on the part of the developed world whence environmental disaster warnings are emanating. In terms of the total amount of current industrial pollution, aren't the more developed 20 per cent of the world's population responsible for 80 or even 90 per cent of the global pollution? How much have the developed countries gone beyond pollution control and proceeded to "de-industrialize" or "de-develop"? Surely, the environmentalists of the developed world are not asking the developing countries merely to control their increasing industrial pollution better. They are in fact asking them to forego exponential economic growth and decelerate its pace of industrialization. Unless and until the actions of the rich countries demonstrate clearly their determination to de-industrialize, the poor countries' reaction would only be that they will industrialize first and control pollution later when they can afford to do so.

Having succeeded rather remarkably in decreasing the rate of population growth, Korea finds itself in a relatively strong position to discuss the relationship between population growth and industrial development. Koreans are keenly aware of the threat posed against the finite limits of the global environment by uncontrolled population growth. But it is difficult for Korea to equate industrial growth simply with population growth. The pollution caused by the former is amenable to effective control while that of the latter is much less so. Moreover, the former concerns more the quality of life, whereas, the latter the quantity of life in being and their material subsistence. It is politically more feasible to check and limit the latter than the former. The tendency of the industrialized countries to lump the two together under the heading of environmental pollution only exacerbates the suspicion of the Third World that the rich countries are trying to shift the blame for all the pollution on to the poor countries. Given the low per capita pollution in underdeveloped countries, the danger of environmental pollution only complicates the argument against population growth. The masses in these poor countries cannot grasp the threat to their environment caused by their refusal to practice birth control; but they can understand the impact of birth control on their standard of living - more nutritious meals, better homes and clothes, a transistor radio, a television set, and other fruits of industrialization. To put it more bluntly, population growth will not be checked without the tangible fruits of industrialization as an incentive and an inducement realistic enough and comprehensible enough for the masses in the Third World. If the industrialized world persists in an "ecological scapegoatism" by fallaciously multiplying the high per capita pollution already prevailing there by the billions of humanity living and being bred in the underindustrialized world, the latter's population growth will be made that much more difficult to end or even to control. Industrial productivity has been proven to be the most effective alternative to biological productivity. The masses of the Third World should not be deprived of biological productivity without some significant alternative, if for no other reason than Christian charity.

For a Non-Domineering God

I am a layman without much understanding of theology. But my ignorance sustains my reckless boldness. I have some sympathy for Christian theologians for their fear of tampering with some fundamental tenets in the biblical concept of God as a Creator who has a proprietary interest in maintaining his dominion over the earth. The proprietor-God, of course, has to have a steward; and man is said to be this steward. In keeping with the European dialectics characterized by rigid either-or dichotomies the steward-man strives strenuously to maintain his dominion over Nature for fear that his failure to dominate may result in his subjugation to Nature. Either he conquers Nature or Nature conquers him. In the Christian view, without dominion over the Material World man ceases to be.

Non-Christian Korea has had a different world-view. Nature was never hostile to man; on the contrary, man without Nature was nothing, just as Nature without man was nothing. Man is with Nature from the beginning and shall be with Nature to the end. Neither dominates the other; no dominion, no subjugation, and conquest is sought by either. Man does not seek to increase his power unlimitedly at the expense of Nature. He adjusts himself to the rhythm of Nature; a failure to do so means his death. Man knows that the dominion over Nature inevitably includes the dominion over his fellowmen.

If a Korean is to believe in a god, he would rather like to see God already present in Nature. He would even think that God is Nature. It matters little if his Euro-American friends criticize him for his animism, pantheism, shamanism or any other kinds of primitive

irrationalisms. When he bores a tunnel through the "entrails" of a mountain, he thinks that God too must feel some pain. But that does not mean that he would sit still for fear that he might damage Nature and all the things therein. He hunts animals, he catches fish, he builds bridges and irrigation and flood-control dams, he cuts trees to build his house and heat it, he mines for minerals - all for his modestly comfortable subsistence. Although he catches a fish and eats it, he does not fail to celebrate a festival for the fish he has eaten and he will have to continue to eat it in order to survive. He claims no dominion over it. There is interdependency and mutual necessity. Since man appears to need fish more than fish needs man, a festival or a service to fish by man is needed to establish that mutuality and interdependency which might otherwise be lacking. It is this mutuality that keeps man from dominating and exploiting Nature.

In Korea male domination was never a prerequisite for good marriage. Yang (male, positive, etc.) does not, and should not, dominate yin (female, negative, etc.). Must man dominate Nature to have a good Christian life? It is about time that Christianity came up with a theology based on a less domineering and proprietary image of God. In addition to a more realistic definition of progress and development, it has to work out a new system of ethics which restricts man's right to dominate Nature out of his own greed for power. God and Man must be integrated back into the Creation.

A Proposal

I should like to propose the following:

Establishment of an international agency with fund contributed by the industrialized countries in rough proportion to their current shares of the global industrial pollution to finance the installation and operation of anti-pollution equipment for new industrial production facilities being set up in developing countries.

The purpose is to promote "industrialization without pollution" in underdeveloped countries rather than stymying industrialization.

The agency's (which might be called International Pollution Control Agency) fund could be augmented by a "raw materials depletion tax" and a progressive punitive tax imposed on excessive per capita pollution.

IPCA could also be given powers to police environmental pollution throughout the world with powers to issue warnings and "cease and desist" orders against excessive polluters. It could also act as a clearinghouse for anti-pollution information.

DON'T FORGET TO LAUGH AND PRAY

W.H. Auden

If you are thinking about making the world better for the future, what kind of knowledge about the past will you need? This can vary. I think that at this particular point in history, the things we have to study - and here we need the help of historians - are the various European revolutions, starting, let us say, with the Papal Revolution, then coming on to the Reformation, the English Revolution, the American Revolution, the French Revolution, the Russian Revolution. Those things have to be studied; we can learn from them. The rejection of the past, I think, is all nonsense. I must say I agree very much, about tradition and the past, with a remark by Chesterton, when he says, "Tradition means giving votes to that obscurest of classes, our ancestors. It is the democracy of the dead. Tradition refuses to surrender to the arrogant oligarchy of those who merely happen to be walking around."

Most people there were scientists ... I know how prima donnaish artists can be; I never realized that scientists are just as bad! And then I couldn't believe my ears when I heard people calling for a series of ethical axioms. The idea of an axiom comes from mathematics. You can have a series of axioms for Euclidean geometry; you can have another series of axioms for another kind of geometry. There is no possible question of talking about one being better than another. And to suppose, when we talk about right and wrong, that this is based on logic, seems to me to be an utter misunderstanding of how human beings work at all. The statement, "A straight line is the shortest distance between two points", and the statement, "Thou shalt love thy neighbour as thyself", belong to two completely different worlds of discourse. If we think how in practice we ever learn anything about ethics and behaviour, it is in a series of commandments: "You should do this." "You shouldn't do that." It is always stated in the imperative.

All of us as children do in fact start with credo ut intelligam. If I were a baby and I didn't believe, when my parents said to me that there is a word for a thing, I should never learn to speak, obviously. Belief must always precede doubt - this seems to me to be quite clear.

Now, about the development from Darwin on in biology: to what extent has it changed our view of human nature? In my view, very little indeed. Human beings have always known that, like other mammals, they were born viviparously, they have to die, they have to reproduce sexually, they have to eat, they have to defecate, and so on. This we have always known. The curious thing actually is that in spite of our scientific knowledge - this may not have anything to do with the sciences, it may simply have to do with technological society - in fact, we probably feel far less contact with the animal world than a hunting tribe did. We are always being told, whether we start from Copernicus or whether we come on to Darwin, that the result of this was to humble human beings so that they would realize that they were not as grand as they thought. I see no evidence that this happened at all. We got much more conceited, in my opinion.

Then, if you think for a moment about natural selection, it seems to me that disaster is often predictable. For example, it is quite obvious that if you were to get a sudden violent climatic change, as you did in the ice age, a great many species would be wiped out.

But, I don't think that success is predictable. What we observe is that whenever there is an ecological niche vacant, somehow or other some creature fills it. In some cases, the history is extremely complicated - take the case of a parasite like the liver fluke. If you ask me only to believe that this is the result of random mutations - and as you probably know most random mutations that we observe are lethal - put through the sieve of natural selection, I think this is much crazier than believing in fairies.

I heard people talking (in our meeting) about random events. Now, it is one thing to say an event is unpredictable. I think the use of the word "random" betrays a metaphysical presupposition that there can be no such thing as teleology. But, if somebody says that one event is random, why shouldn't all thoughts be random events, in which case why should I believe a word anybody says?

I personally do not believe in random events. I believe in miracles and I believe in providence. Take, for example, the question of the "invention" of photosynthesis, which was certainly completely unpredictable, and without it life as we know it could not be. All I can say about it is that this was a very providential event. Again, I know that, knowing what I know about the process of human reproduction and how long we have been here on earth, it is almost a statistical impossibility that I should be walking this earth. How can I take it except as a miracle, which I must do my best to deserve? I think that a lot of people (in our meeting) had forgotten two of the three worlds I think essential for life. They were speaking from the point of view of the vita activa. What I felt a number of them had forgotten was how to laugh - and by that I don't mean the Voltarian smile of reason, I mean belly laughter, which I shall talk about in a moment as the spirit of carnival - and how to pray.

If I talk about prayer, I think the petitionary side of it is purely a preliminary, superficial thing, because it is quite involuntary. Naturally, we are always asking: Can I marry the girl I love? Can I sell my house? or whatever. But a prayer really begins at the point at which one listens to a voice. I am not going to argue with people about this; I would call it the voice of the Holy Spirit, you could call it the inner light. The only things you cannot call it, you cannot call it reason, and you cannot call it the superego, because the superego could never say anything new.

In prayer, then, you listen and you are told, "Now, do this." It is often something you don't want to do. So, the motto over the world of prayer is Respondeo etsi mutabor (I reply even though I am changed). While I saw that these people had forgotten it, I knew that any and all of them had at least prayed once in their lives, when they heard a voice telling them, "You are to serve science." This was addressed to them not as scientists, but as human beings...

I should say a few words, first of all, about the vita activa. This is purposeful action in which we take responsibility for the results of our actions, whatever they may be. Here, of course, there is no question of equality. There is independence, interdependence, but not equality. I can't say a scientist is equal to an artist, or even that a man is equal to a woman; they are different ...

In the world of prayer we are all equal in the sense that each of us is a unique person, with a unique perspective on the world, a member of a class of one. The myth of our common descent from a single ancestor, Adam, is a way of saying that as persons we are called into

being, not by any biological process, but by our parents, our siblings, our friends, our enemies, and so on. This is where one listens to be told what one is to do next; and there is always something new.

On the other side is what I would call - connected with laughter as I think of it - the spirit of carnival, as exemplified in the Saturnalia, in medieval carnival, and the Roman carnival described by Goethe in February of 1776. In the world of the vita activa there is no question of equality. There is a special kind of equality in the case of prayer. In the case of carnival, there is complete equality.

Essentially, what is carnival about? Here the great writers about it are Rabelais and Dickens. It is a common celebration of our common fate as members of our species. Here we are, mortal, born into the world, we must die, and this applies to everybody, so that there is a mixture. This is what laughter also implies, because laughter is both an act of protest and an act of acceptance. There is joy in the fact that we are all in the same boat, that there are no exceptions made. On the other hand, we cannot help wishing that we had no problems - let us say, that either we were in a way unthinking like the animals, or that we were disembodied angels. But, this is impossible; so we laugh because we simultaneously protest and accept.

In the world of carnival there is absolute equality. All distinctions of rank and even of sex are abolished. The women dress up as men, the men dress up as women. We discard our selves; we can wear masks. It is also a world of grotesque and parody; we wear grotesque masks, grotesque noses and things. It is a world of mock obscenity, mock abuse, mock blasphemy.

On the question of blasphemy, I was reading a book by a Russian about Rabelais, who tried to think that the private parodies of religious rites were a protest against religious beliefs. But, of course, this is all nonsense. First of all, if the ecclesiastical authorities had thought so, they soon would have stopped it. The fact is that blasphemy, of course, always implies belief, just as literary parody does, as Lewis Carroll pointed out: you can't parody an author you don't admire. It is no accident that carnival comes just before Lent, which is a time for fasting and prayer.

Carnival is a time not only of mock obscenity, but also of mock aggression. I will just give you a passage here from Goethe, describing one scene: "Here come young fellows dressed up as women, one of whom seems to be far advanced in pregnancy. They are all strolling up and down peacefully, until suddenly the men start to quarrel. The brawl gets more and more violent, until both sides draw huge knives of silver cardboard and attack each other with them. The women cry murder and try to part them, pulling them this way and that. The bystanders intervene just as if they believed that the affair was in earnest. Meanwhile, as if from shock, the pregnant woman is taken ill. A chair is brought, and the others give her aid. She moans like a woman in labour and the next thing you know she has brought forth some monstrous creature into the world to the great amusement of the onlookers. The players and the troupe move on to repeat the performance or some farce like it elsewhere."

On the last evening of carnival, everyone appears in the streets carrying a lighted candle - an obvious symbol of life. Everyone tries to blow out the candles of others, or to relight his from theirs if his is blown out. All cry, "Sia ammazzato" ("Drop dead!"). All distinctions of rank are abolished. Goethe describes how he heard a small boy screaming at his father, "Sia ammazzato, il signor padre!"

All these things seem to me essential. Without the carnival, prayer tends to become Pharisaic or gnostic. Of course, without the vita activa, we should all perish in style. Without prayer, carnival turns ugly and dirty and instead of the inner voice, there comes the voice of the demagogue, because people without prayer have forgotten how to address others, and they try to keep it objective - and then there is trouble for that.

It seems to me, for example, that the hippies are trying - and quite rightly because this tends to disappear in a technological civilization - to revive the spirit of carnival. Unfortunately, it will fail, I think, insofar as they reject the active life of work in between.

Trying to think about what changes have come about through astronomy and physics in our position in the physical universe, I look at it this way. It is true - and from a Christian point of view this seems to me essential - that it is absolutely right that the physical universe should exist etsi Deus non daretur (as if God did not exist). It has to be purged of all kinds of polytheism, which is then expecting, on the earth, God to do for us what we are supposed to do for him. Just as Adam was put in the Garden of Eden to dress it, we are here to look after the universe. By that I think that one has to help the universe realize goals which it cannot realize itself.

If I want to use an analogy, I say that in regard to the inorganic universe, I see our relation rather like that of a sculptor. No sculptor whom I have ever spoken to thinks of enforcing his forms on nature. He thinks: "I lay bare, I realize in a stone, a form that is latently there."

In regard to living things, I think the analogy, possibly, is that of the good animal trainer. A well-trained sheep dog has realized his dogginess, so to speak, more than a wild dog, just as a spoiled lap dog has had his dogginess debased. Therefore, I think we might have a decent world if it were universally recognized that to make a hideous lampshade, for example, is to torture helpless metals. And that every time we make a nuclear weapon, we corrupt the morals of a host of innocent neutrons below the age of consent.

A REJOINDER TO "THE REVOLUTION BEYOND THE REVOLUTIONS"

Richard Shaull

You have asked me to respond to your criticism of my position in your article, "The Revolution Beyond the Revolutions" (Anticipation No. 9). I would like to make an attempt to do so. You and I are in basic agreement at so many points. We are both concerned about the injustice and oppression in our world today and are committed to doing something about it. We see eye to eye on the question of what is wrong and our goals are probably not so far apart. Moreover, we share a common faith and draw on the theological heritage when we try to deal with the social problems before us. Why then do we have so much trouble when we try to understand or communicate with each other?

Part of the problem, of course, lies in the fact that we have been shaped by different experiences, and gradually have developed different perspectives on the issues facing us. We have also come to different interpretations of what has been happening in the ecumenical movement in recent years. You begin by saying that "the ecumenical discussions of church and revolution in the 1966 World Conference on Church and Society opened a new era in Christian social thought". I would say that those discussions raised the issue of revolution to the point where it could no longer be ignored. That could have marked the opening of a new era in Christian social thought. It did not. What some of us were trying to say at that conference was, if we take revolution seriously we as Christians will find our theology, our social thought, our church and our present forms of Christian existence called into question.

To accept that challenge would open a new era. To turn our backs on it would mean the loss of one more opportunity for repentance and for witness at a crucial moment in history. Your article focuses almost entirely on the crisis in revolutionary thought and praxis and the contribution which Christian social thought, relatively secure in its position, can make in that situation. What I have written assumes a crisis in revolutionary and Christian thought and praxis, and represents a search for new possibilities for theological reflection in that situation. It is perhaps this persistent questioning of so much of what we have both taken for granted for so long that cuts closer to the heart of the problem. Let me at least try to get at this at several specific points.

1. We differ as to where we have to begin and what we begin with. You seem to take for granted that it is both obvious and inevitable that we start with the given structures and the way they operate and, within that context, work at bringing about change. And you are content to work at this along the lines laid down by Reinhold Niebuhr and with the conceptual tools he provided for us.

For me, the hard reality I must face is the fact that the given institutions, and the conceptual paradigms we use in dealing with them constitute the problem to be overcome. They are less and less capable of meeting the most basic needs and desires of large numbers of people, of solving our most urgent urban and international problems, or of providing us with even a reasonable degree of justice. To remain bound by them means sclerosis and possible death. My starting point therefore is the necessity to break out of this bind, find the resources for thinking and acting in order to bring about a change of systems and thus to open up a new future for ourselves and others.

For this reason, I have latched on to the word revolution, and consider the revolutionaries to be my allies. Revolutions have been the instrument, at certain moments in history, by which this sort of change has happened. This involves the risk of chaos and anarchy. But I am convinced that in certain situations that risk is worth taking - if the alternative is that of sticking with an inflexible and uncreative system which threatens to destroy our hard won achievements, blocks urgently needed changes in the face of new problems, and creates increasing incoherence and oppression.

I realize that revolutionaries often tend to think about what they are doing in simplistic terms and believe that they can achieve their goals by living and functioning outside of the major institutions around them. I certainly do not share that belief. But we do not have to accept the presuppositions of these institutions, be loyal to them, function in the terms they lay down, or allow ourselves to be easily co-opted by them. In other words, we do not have to be circumscribed by the terms they have set.

I am excited about an eschatological perspective and the way it can function for us because it makes another possibility for thought and action available to Christians. By affirming that the future determines the present, that we can conceive of and give form to qualitatively different economic, social and political institutions, an eschatological outlook provides us with another starting point. The task before us is to re-define our situation rather than accept the terms given by it, work through chaos and incoherence, and try out new alternatives. Christian history is full of people who have done this; and as Ernst Bloch, Karl Mannheim and others have reminded us, their influence has gone far beyond the Christian community to play a decisive role in shaping the political history of the Western world. Today such an eschatological approach can, I believe, make an important contribution by consistently reminding us, whether we be liberal reformists or revolutionaries, that revolution is a matter of creating, not a new space but a new time. In the words of Rosenstock-Huessy, it opens "new joints in time".

This is where the business of radical communities comes in. In the early stages of a process of revolutionary change, there are no viable political options and few, if any, models for new institutions. The change we hope for will not come about, as some would like to believe, spontaneously or by sporadic political explosions or movements. But in an interim period it is possible for small groups to make room for and experiment with new patterns of relationships and new institutional forms, to learn from their failure as well as their small successes, and to support and learn from each other in a long struggle. For me this has a special priority today. In such communities we have a chance to work out and live a qualitatively different style of existence in the midst of change, i.e. a constant process of transformation. As we do this, we may also get some clues as to the forms of relationship which offer a fuller life to men and women and test out ways of institutionalizing them in various spheres. Such developments at the micro-level will not make a revolution. But it is just possible that they can provide the context and the dynamics for the eventual emergence of political strategies for systematic change.

To conclude from this, as you have done, that I have "tremendous confidence in the creative outcome of life in small groups or communities", that I have "greatly simplified" the process of social change, or think of such communities as existing "withdrawn from any real dependence" upon the present system is not only to distort what I have said, but to miss the point of it. And if I am right, the failure of ecumenical social thought to give

importance to this means that the Christian community is missing the opportunity to make a significant contribution to the social struggle today, a contribution for which it is especially prepared because of the resources it has for transcending the limits of the given social order, its historical experience of community, and its vision of life as a constant process of death and resurrection.

If my position is to be categorized, I protest against it being labeled "an apocalyptic concept of revolution" rather than an eschatological one. I am trying to deal with history and its open-endedness; apocalypticism does not. My concern is for the vision of new future possibilities which sees value in and draws upon the past as it is reinterpreted and recreated; apocalypticism is of little help at this point. But I would insist on making use of the apocalyptic imagery in a limited way. What it does is to remind us, at some points in time, that certain apparently powerful social structures do indeed stand under imminent judgement. To move to the future means getting them out of the way; consequently, their power to mystify us and to claim our loyalty is broken. Without this element the eschatological vision, especially in our circles, is often reduced to an evolutionary one.

2. Your comments reveal your conviction that I, along with most revolutionaries, am a victim of utopianism, that I advocate "complete discontinuity with the structures of the past and total liberation from them", and that I encourage the "tendency to absolutize and idealize revolutionary change" which, in the dynamics of revolution, lends support to a "holy crusade". I am surprised that, after all our discussion over the last fifteen years, you should imagine that I am interested in one revolutionary change of structures which will then establish an order of liberation and justice. I am simply interested in finding ways to solve problems which cannot be solved within the present structure. This means searching for new intellectual paradigms and creating new patterns of personal and family life, of education and of social organization; it involves developing new models for economic and political institutions. If working for changes of this type sounds utopian then I have less fear of that than I do of decaying institutions and what they do to stifle human energies and reduce possibilities.

The problem lies in the fact that both of us have too easily accepted past ways of thinking about revolution, especially Marxist ones. In my speech at the Geneva Conference (1966), I touched on this but did not go very far. In the last couple of years, I have tried to probe deeper and have reached the point where I very seldom speak of revolution. What we must do now, I believe, is to ask new questions about the nature of change and how it can be brought about. This involves giving up the idea of total revolution as well as that of one revolutionary event by which one whole system is replaced by another. In the place of such spacial categories we can gradually give shape to a transforming vision through time and to a strategy of systemic change which focuses on initiating and linking plural transformations.

This shift has far-reaching implications for ecumenical social thought. Rather than continuing to discuss revolution and to attack its utopianism, we can share and reflect upon the real dilemmas of those who know that a change of systems is imperative but are not at all sure that it is possible. If, faced with that situation, some of them tend to move back and forth between despair and utopian dreams, we might be able to suggest alternative ways of thinking and working which make it possible to move ahead. We can demonstrate that it is possible to live a process of breaking decisively with our past and also making new connections with it which can provide insight and power for the work of creation. And if, among our companions in this struggle, there are those who tend to absolutize revolutionary change, we can incarnate and perhaps provide resources for a more tentative and open-ended approach.